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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,917	05/11/2001	Satyanarayan A. Srinivasan	10032	7603

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EXAMINER
RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
1753	4

DATE MAILED: 04/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T-D-4

Office Action Summary	Application No. 09/853,917	Applicant(s) SRINIVASAN ET AL.	
	Examiner Christopher D RoDee	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) 19-35 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 & 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-18, drawn to a toner, classified in class 430, subclass 108.6.

II. Claims 19-35, drawn to a development method, classified in class 430, subclass 122.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in another and materially different process such as developing an ionographic image with a developer transported on the surface of a developing rotating sleeve and inside the sleeve there is provided a stationary magnetic core and an AC voltage is provided to the sleeve surface so that the toner jumps from the sleeve to the surface of the ionographic image. Alternatively, the developer can be used to develop an electrostatic latent image or an ionographic image by a cascade development process.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with John Wood on 8 April 2002 a provisional election was made with traverse to prosecute the invention of group I, claims 1-18. Affirmation of this

election must be made by applicant in replying to this Office action. Claims 19-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

Applicants are asked to complete the copending application data on page 1 of the specification. Additionally, applicants are asked to replace the application number with a patent number, when possible, for each application referenced in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejected claims are indefinite because it is unclear what electrographic process is being used to measure the Q/m values in the instant claims. It appears that the Q./m values would vary depending on the specific process used so that by one process the developer would fall within the scope of the claims but would not fall within the scope of the claims if other processes were used. Similarly, it is unclear what process is being used to define the dust level and amount of silica of the instant claims. It appears that the specific process used would materially affect the amount of dust produced, which would in turn define the amount of silica particles.

These claims have been examined as if in product-by-process form, but the current phraseology appears to include the situation where the developer and its use are claimed in the same claims. Such claims are ambiguous because the claims must be limited to a single statutory category of invention. See MPEP 2173.05(p).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
>
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
>
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1, 6-9, 11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gady *et al.* in US Patent 5,948,585 considered with *Handbook of Imaging Materials*, to Diamond pp. 182-3. Diamond is cited for its disclosure of inherent properties of carriers and toners.

The reference Examples 1 and 2 disclose a developer having 8.5 μm average particle diameter toner and a hard ferrite carrier. The toner has up to 2 wt. % silica particles adhered to

its surface (col. 7, l. 19-21). The exemplified silica is Aerosil R972, which is the same silica as used in the instant specification (see p. 17). These silica particles are identified in the specification as having a BET surface area of 130 m^2/g. Because the silica is used in the preferred amounts of the instant invention the amounts present in claims 13-18 are also met by the reference. The toner and carrier are inherently of opposite charge because the toner could not be "carried" by the carrier if they were of the same charge; that is, they would repulse each other. See Diamond, pp. 182-3.

Claims 1 and 6-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Desie *et al.* in US Patent 5,633,110 considered with *Handbook of Imaging Materials* to Diamond pp. 182-3. Diamond is cited for its disclosure of inherent properties of carriers and toners.

Desie discloses a developer having toner particles and hard ferrite carrier particles. The toner has a volume-average particle size of 8.5 μm and a number-average size of 6.5μm (col. 13, l. 49-51). The toner powder of the reference is mixed with 0.5 wt. % silica particles having a specific surface area of 260 m^2/g (col. 13, l. 58-67). Because the silica is used in the preferred amounts of the instant invention the amounts present in claims 13-18 are also met by the reference. The reference states that the toners are mixed with hard magnetic ferrite carriers to form developer compositions. Strontium-containing ferrites are specifically disclosed (col. 10, l. 25-49). The toner and carrier are inherently of opposite charge because the toner could not be "carried" by the carrier if they were of the same charge; that is, they would repulse each other. See Diamond, pp. 182-3.

Claims 1-11 and 13-18 are rejected under 35 U.S.C. 102(a) and 102(e) as being anticipated by Srinivasan *et al.* in US Patent 6,210,851 considered with *Handbook of Imaging*

Materials, to Diamond pp. 182-3. Diamond is cited for its disclosure of inherent properties of carriers and toners.

Srinivasan discloses an electrostatic dry developer comprising toner particles and hard magnetic ferrite carrier particles (col. 6, l. 1+). The toner particles have a size of from 7.8 to 8.5 μm (col. 3, l. 39-40). The toners are surface treated with silica particles. Exemplified silicas are given in Table 2 as R972 having a surface area of 130 m^2/g and are treated with dichlorodimethylsilane hydrophobicizing agent and RY200 having a surface area of 100 m^2/g and a surface treatment of polydimethylsiloxane. Examples 7-9, 12-14, 17 and 18 are inventive toners having 20 g of the hydrophobic silica per 2000 g of toner particles. Comparative Examples 2-5, 11, and 16 are similarly applicable because they use the same silica in preferred amounts. Because the silica is used in the preferred amounts of the instant invention the amounts present in claims 13-18 are also met by the reference. The toner and carrier are inherently of opposite charge because the toner could not be "carried" by the carrier if they were of the same charge. See Diamond, pp. 182-3.

Claim Rejections - 35 USC §§ 102 & 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13-18 are rejected under 35 U.S.C. 102(a) and 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Srinivasan *et al.* in US Patent 6,210,851 or

Gady *et al.* in US Patent 5,948,585, each considered with *Handbook of Imaging Materials*, to Diamond pp. 182-3.

The references were described above. These references do not disclose the Q/m or dusting characteristics of the instant claims but because the references use the silica is preferred amounts of the instant invention (e.g., see claims 8, 9, and 10) it appears that the references inherently have the requisite amounts of claims 13-18.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan *et al.* in US Patent 6,210,851 or Gady *et al.* in US Patent 5,948,585, each considered with *Handbook of Imaging Materials*, to Diamond pp. 182-3, all in view of Miskinis *et al.* in US Patent 4,764,445.

The primary references were discussed above. Neither reference discloses strontium ferrite as the hard ferrite for the developer. Miskinis discloses improved development efficiency through the use of a lanthanum strontium ferrite carrier (Examples). This carrier gives improved development speeds without a loss in copy quality (col. 2, l. 12-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the lanthanum strontium ferrite carrier of Miskinis in the invention of either Gady or Srinivasan because each reference desires hard magnetic carriers and Miskinis discloses a hard magnetic ferrite carrier that provides improved development speeds without a loss in copy quality.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

The citizenship of the first inventor has been altered and the telephone correspondence name has been altered. The inventors have initiated neither change.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The un-applied references cited in the PCT and EP search reports do not appear to be closer to the claimed invention than the applied art. That is, the best art has been applied for the claims under consideration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 703 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

The Art Unit of this application will change to 1756 on 21 April 2002 Correspondence after this date should reference the new art unit to expedite processing.

CHRISTOPHER RODEE
PRIMARY EXAMINER

cdr
April 8, 2002